

a reflective layer; and

a phase control layer disposed between said transparent substrate and said phase change recording layer, said phase control layer having two areas defined in a laser spot, the laser spot defined by where the reproducing beam is incident to said phase control layer,

wherein:

the irradiation with the reproducing beam of said phase control layer within the laser spot causes a phase difference due to one of the two areas changing between a crystal and an amorphous phase that alters an optical path of the reproducing beam reflected from said phase change recording layer so as to prevent portions of the reproducing beam reflected from said phase change recording layer from passing through the one area that has converted between the crystalline and the amorphous state, and

said phase change recording layer does not change phases when irradiated by the reproducing beam.

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cont.

5. (TWICE AMENDED) The phase change optical disc of claim 3, wherein said phase control layer is formed of a material selected from the group consisting essentially of the GeSbTe family with respect to changing between the crystalline and the amorphous states due to the reproducing beam, InSbTe family with respect to changing between the crystalline and the amorphous states due to the reproducing beam, AgInSb family with respect to changing between the crystalline and the amorphous states due to the reproducing beam, Au, and Ni.

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8. (TWICE AMENDED) The phase change optical disc of claim 6, wherein said phase control layer is formed of a material selected from the group consisting essentially of the GeSbTe family with respect to changing between the crystalline and the amorphous states due to the reproducing beam, InSbTe family with respect to changing between the crystalline and the

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Cont. amorphous states due to the reproducing beam, AgInSb family with respect to changing between the crystalline and the amorphous states due to the reproducing beam, Au, and Ni.

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SUB CH 11. (ONCE AMENDED) The phase change optical disc of claim 2, wherein said phase change recording layer is formed of a material selected from the group consisting essentially of the GeSbTe family with respect to changing between the crystalline and the amorphous states due to the recording beam, InSbTe family with respect to changing between the crystalline and the amorphous states due to the recording beam, and the AgInSbTe family with respect to changing between the crystalline and the amorphous states due to the recording beam.

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SUB CH 13. (TWICE AMENDED) The phase change optical disc of claim 1, wherein the phase control layer is formed of a material selected from the group consisting essentially of the GeSbTe family with respect to changing between the crystalline and the amorphous states due to the reproducing beam, InSbTe family with respect to changing between the crystalline and the amorphous states due to the reproducing beam, AgInSb family with respect to changing between the crystalline and the amorphous states due to the reproducing beam, Au, and Ni.

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SUB CH 15. (ONCE AMENDED) The phase change optical disc of claim 1, wherein said phase change recording layer is formed of a material selected from the group consisting essentially of the GeSbTe family with respect to changing between the crystalline and the amorphous states due to the recording beam, InSbTe family with respect to changing between the crystalline and the amorphous states due to the recording beam, and the AgInSbTe family with respect to changing between the crystalline and the amorphous states due to the recording beam.

Sub C 18. (TWICE AMENDED) A phase change optical disc compatible with a recording beam and having multiple layers formed on a transparent substrate, the multiple layers including a reflective layer, comprising:

a phase change recording layer which converts between the crystal phase and the amorphous phase by irradiation with the recording beam; and

a phase control layer disposed between the transparent substrate and said phase change recording layer, said phase control layer having a plurality of areas defined in a laser spot, the laser spot defined by where the reproducing beam is incident to said phase control layer,

wherein:

B7 the irradiation of the laser spot on said phase control layer with the reproducing beam causes a phase difference in the plurality of areas on said phase control layer due to ones of the plurality of areas being converted between a crystalline and an amorphous state that alters an optical path of the reproducing beam reflected from said phase change recording layer so as to prevent portions of the reproducing beam reflected from said phase change recording layer from passing through the ones of the areas that have converted between the crystalline and the amorphous state, and

said phase change recording layer does not change phases when irradiated by the reproducing beam.

REMARKS

INTRODUCTION:

In accordance with the foregoing, claims 1, 5, 8, 11, 13, 15, and 18 have been amended to clarify existing features without narrowing the scope of the claims and/or to correct dependencies. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1-3, 8-11, and 13-21 are pending and under consideration. Reconsideration is